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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,809	01/30/2004	Ukyo Tomioka	25-260	3120

7590 03/08/2005  
Arnold International  
P.O. Box 129  
Great Falls, VA 22066

EXAMINER

RAIZEN, DEBORAH A

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/766,809	Applicant(s) TOMIOKA, UKYO	
	Examiner Deborah A. Raizen	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 5-12 and 17-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>0104</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 13-16 are rejected under 35 U.S.C. §102(b) as being anticipated by Kim (5,886,828).

In regard to claim 1, Kim discloses a zoom lens (Fig. 1A, Table 1 in cols. 6-7) formed of only four lens groups (labeled 1-4 in Fig. 1A) arranged along an optical axis, in order from the object side, as follows: a first lens group having positive refractive power (1); a second lens group having negative refractive power (2); a third lens group having positive refractive power (3); and a fourth lens group having positive refractive power (4); wherein the first lens group and the third lens group do not move during zooming (from Table 2, the sum of A, B, C, and D is the same at the telephoto position as it is at the wide-angle position and the sum of C and D is also the same at the two positions); the second and fourth lens groups are moved along the optical axis during zooming (col. 2, lines 61-64); the first lens group includes, in order from the object side, a first lens element having negative refractive power (12), a second lens element having positive refractive power (11) and a convex lens surface on the object side (r2) that is cemented to the first lens element (Table 1), a third lens element (13), and a fourth lens element having

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positive refractive power (14) and a convex lens surface on the object side (r6); and the following conditions are satisfied:

$$v_{d1} < 45 \quad (25.46 \text{ in Table 1})$$

$$N_{d2} < 1.52 \quad (1.48749 \text{ in Table 1})$$

$$v_{d2} > 63 \quad (70.44 \text{ in Table 1})$$

where  $v_{d1}$  is the Abbe number of the first lens element of the first lens group at the d-line,  $N_{d2}$  is the refractive index of the second lens element of the first lens group at the d-line, and  $v_{d2}$  is the Abbe number of the second lens element of the first lens group at the d-line.

In regard to claim 2, in the Kim zoom lens, the first lens group consists of the first lens element, the second lens element, the third lens element, and the fourth lens element (Fig. 1A and Table 1).

In regard to claims 3 and 4, in the Kim zoom lens, the following condition is satisfied:

$6 < f_l/f_w < 15$  (Condition (2) in col. 5, line 14, is a more narrow range of values, any of which satisfies the recited range)

where  $f_l$  is the composite focal length of the first lens group, and  $f_w$  is the focal length of the entire four-group zoom lens at the wide-angle end.

In regard to claims 13-16, in the Kim zoom lens, at least one of the lens surfaces (19 in Table 1, labeled r19 in Fig. 1A) of at least one of the lens elements (17) of at least one of the third lens group (lens element 17 in the third lens group, Fig. 1A) and the fourth lens group is aspheric (Table 1 and col. 7, lines 12-20).

*Allowable Subject Matter*

3. Claims 5-12 and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of claims 5-12 and 17-20, in such a manner that a rejection under 35 U.S.C. §102 or §103 would be proper.

The prior art fails to teach a combination of all the features in claims 5, 7, 9, and 11. For example, these features include the detailed structure and conditions recited in claim 1 and also the limitations that the fourth lens group includes, in order from the object side, a first lens element having positive refractive power ... a second lens element having a biconcave shape, a third lens element having positive refractive power, and a fourth lens element having positive refractive power, in combination with all the other limitations of the claim. The remaining claims depend on claims that have allowable subject matter and therefore have allowable subject matter as well.

*Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakayama (5,583,699) discloses zoom lenses (examples 3-8) that anticipate claims 1-4, already rejected above. Example 8 in Nakayama also anticipates claims 13-16.


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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah A. Raizen, Ph.D., J.D., whose telephone number is (571) 272-2336. The examiner can normally be reached on Monday-Friday, from 10:00 a.m. to 3:00 p.m. Eastern Standard Time (a part-time schedule).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The USPTO central official fax number is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. For more information, see <http://pair-direct.uspto.gov>. For access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or at 703-305-3028 or at 703-308-6845, or by e-mail at: [ebc@uspto.gov](mailto:ebc@uspto.gov). Additional information is available on the Patent EBC Web site at: <http://www.uspto.gov/ebc/index.html>.

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Scott J. Sugarman  
Primary Examiner